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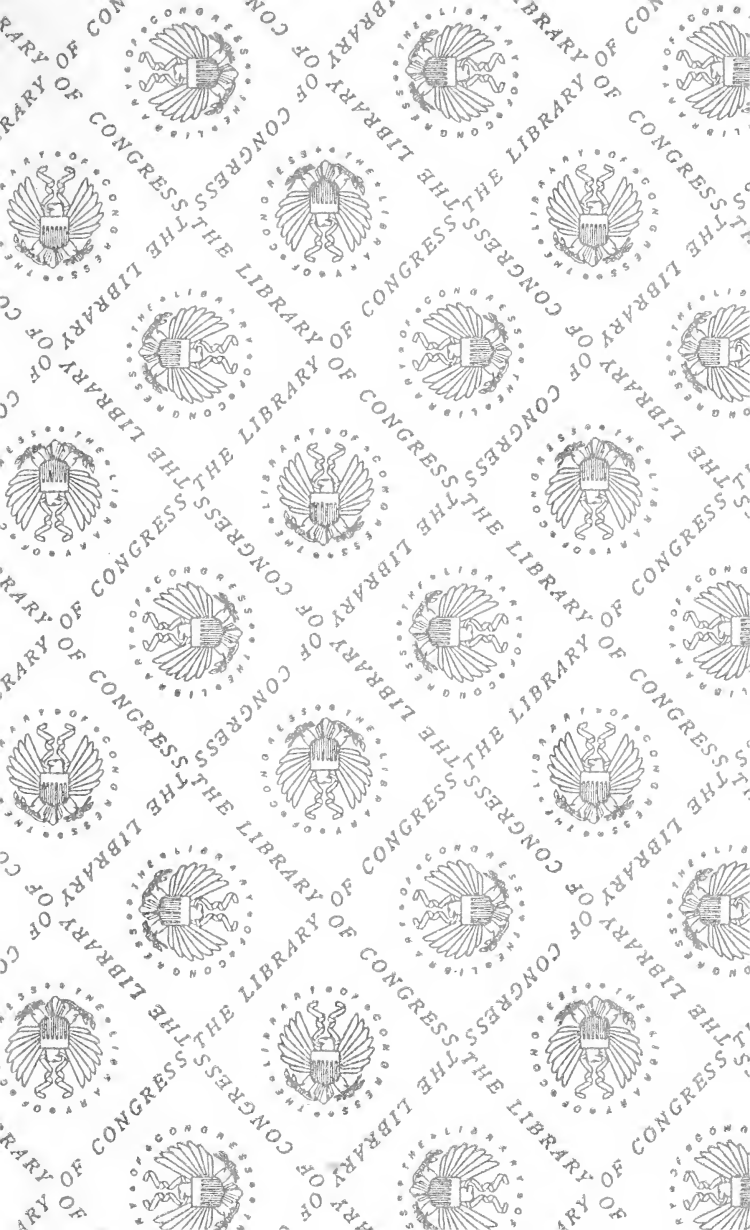
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A PRIMER OF POLITICAL ECONOMY

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A PRIMER

OF

POLITICAL ECONOMY

AN EXPLANATION OF FAMILIAR ECONOMIC PHENOMENA, LEADING TO AN UNDERSTANDING OF THEIR LAWS AND RELATIONSHIPS

BY

S. T. WOOD

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PREFACE

THE most noteworthy feature of organized society to-day is the tendency toward governmental interference in every kind of productive effort. Almost every useful act, from the selling of a cup of tea to the building of a steamship, is supervised, taxed, or helped by some municipal, provincial, state, or national authority. The civil authorities tax, license, or interfere with butchers, cabmen, restaurant keepers, theatre managers, pedlers, manufacturers, second-hand dealers, and proprietors of great mercantile establishments. The taking of wealth from the forests, the mines, and the fisheries is also under legislative control, and is helped and obstructed in many ways. The national authority or government shows the same con-

fused variety of plans in dealing with trade and industry. Purchases of material are discouraged for one use and aided for another; some lines of industry and trade are helped, others obstructed, and others so burdened as to be made unprofitable.

In all this there is a marked absence of method or principle. With the growth of popular government the duty of guiding this complicated policy of interference falls ultimately on the electors. This fact emphasizes the need of giving greater thought to a line of study too much neglected. The wisdom or folly of these varied courses of action must be decided by the voters at the polls, and they must select the truth from a bewildering maze of argument and controversy, wise, foolish, and sometimes personally interested, as varied as the undertakings of constituted authority. The duty of citizenship imposes the necessity of understanding the principles involved in the

complicated processes of commerce by which we live, and with which our elected representatives are constantly interfering. Education is assumed as a public duty, that the people may protect themselves from bad or incompetent citizenship, and for that desirable end, which justifies education at public expense, no study or investigation is more valuable than that of the laws of economics, — the science which teaches how we use, for man's benefit, the resources of nature and the discoveries of all other sciences.

The object of this book is to afford a groundwork for economic study, to explain some of the actual economic phenomena passing through our hands from day to day, that their laws, principles, and relationships may be more intelligently studied and more clearly understood. Everything has been brought within the comprehension of pupils in the fourth forms of the public schools. This has necessitated conden-

sation rather than elementary departures, for it is the simplicity and not the complexity of economic principles that makes them so elusive, even to mature intellects. The reader, and especially the student, is asked to remember that this book is virtually a condensation, and to extend in thought that which is but touched upon or briefly outlined.

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INTRODUCTION

SITTING at breakfast in the morning, a man seldom reflects that for his personal satisfaction the good and useful fruits of the earth and products of labor have been gathered from every quarter of the globe. Beside his plate, which has been made in Staffordshire, is a spoon from the Oneida Community works in New York State and a knife and fork from Sheffield, with handles of wood from Africa or horn from South America. He sits on a chair made of wood from Northern Canada, varnished with the resin of a tree in Burmah or Japan, dissolved in turpentine from the sea-pines of the Landes Department of France or the swamp-pines of Alabama. The seat is of cane from the Malay peninsula. His table-

cloth and napkin are from Belfast. He has tea from China or Japan, coffee from Java or Brazil, bread from wheat grown in the Canadian Northwest, leavened with yeast from Germany. He has canned salmon from British Columbia or canned rabbit from Australia, sealed in tin from Wales. His breakfast is cooked with coal from Pennsylvania, on a stove made of Indiana iron, and surmounted with pipes of sheet iron from the penal colony of Siberia. His salt is from Goderich, his pepper from Ceylon or South America, and his sauce from Worcestershire. He has butter from a neighboring farm, perhaps colored with annotto from Cayenne. His buns are made more palatable by a few currants from Greece.

The commerce which enables a man to obtain for his own use the products of all parts of the world must be complicated and wonderful. He may be a carpenter or bricklayer, a physician, a lawyer, or a teacher, he may work in a great

factory feeding material to a machine which does but one of many operations necessary to the making of some article in common use. Yet for this single useful service, useful only as a help to many others, he is able to secure the many and varied products of the world's industries.

When it is remembered that the production of any one of the things gathered at the breakfast table requires the aid of many hands, trained in various lines of industry, and working in different climes and continents, the truly complex nature of the world's commerce becomes apparent. Through this intricate commerce we live by satisfying each other's wants. By following one line of industry and becoming specially proficient, each is able to secure a share of the products of all the others. To accomplish that end in a community in which each is careful of his own property and jealous lest others may obtain that which is his, is the aim of our trade and industry.

Every useful service rendered for reward, whether the building of a wall, the cooking of a meal, the making of a shoe, the teaching of a lesson in school, the navigation of a ship, or the digging of ore in the mine, is a part of this complicated mechanism, having a relation to all the other parts. Here is something marvelous with which we are surrounded, which we must touch at every turn, which has an influence in settling all the practical questions of daily life, and which we should study and seek to comprehend. The easiest road to an understanding of our complicated industrial and commercial mechanism may be found in the analysis of a single transaction, and for that purpose let us select the purchase of a pair of boots in a city store.

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CHAPTER I

THE HERDSMAN OF THE PLAINS

JOHN DOE, a farmer, comes to the city to buy a pair of boots. He could not make them, nor could he learn in a lifetime the various processes by which they have been produced from the manifold products of nature. He lives by satisfying other people's wants, and has just sold a load of wheat at a gigantic elevator, where it was whisked about with belts, buckets, and revolving screws, to be deposited in a great bin with more of the same kind from farms in all parts of the country. For the wheat he received several bank notes,

some new and crisp, others worn by use, but each bearing an elegantly written promise that a well-known bank would pay bearer on demand five dollars. John gives no thought to this promise, so familiar is he with its common results, and he looks at the notes only to make sure that each has a big figure "5" in the corner. He has parted with a load of good wheat, and has nothing but a few pieces of stamped paper in his pocket. But each paper is a promise that a solvent bank will give him a stated quantity of gold on demand. The merchant hands out a pair of boots, accepts one of the bank notes in payment, and gives back in change, either a big silver coin called a dollar, a silver certificate stating that a dollar is payable to bearer on demand, or a treasury note promising one dollar in "coin." To make the change even John also receives a silver coin marked "quarter dollar." The transaction is so common that it seems scarcely worth de-

scribing, but a glance at some of the essential preparatory work shows it to be one of the most complicated and even mysterious events of human experience.

Let us go back two years. The leather, now so black and shining that John Doe regards it with pride, was then the hide of a cow running freely in a herd on the plains of Argentina. A young Gaucho is snatching a few minutes' sleep on the ground, the moonlight on his upturned face, and his horse, with high and heavy leather trappings, tethered close by. A small cloud passes swiftly across the moon, and in the momentary darkness a perceptible shudder runs through the herd of cattle, appearing as a black mass on the close horizon of the night. Another cloud bigger and blacker passes over, and in the longer interval of eclipse the cattle grow more nervous and restless. Soon the clouds seem to settle down from all parts of the sky, and a

dull shuffling sound tells that the herd is moving. The horse paws the ground uneasily, and the young Gaucho awakes. A glance at the dark, lowering sky reveals the whole situation, and he mounts nimbly into the saddle, urging his horse toward the restless herd. His familiar voice and form have a quieting effect, and he turns the leaders that have already started toward the invisible blackness of the open prairie. The clouds lower, and as the cold dampness of the air threatens a storm, the cattle grow still more timid and uneasy. A movement in another direction is turned back by another gallop around the herd, and as the leaders turn among the slower cattle, there is a momentary quietness. But as the young Gaucho gallops round and round in the darkness, the storm approaches, and he sees that the cattle are growing more and more alarmed.

The next break-away is turned with the great-

est difficulty, and the herdsman realizes that the camp must be aroused. Galloping off to his sleeping companions, he gives the familiar, alarming yell, returning at full speed to the herd, which seems now moving restlessly like a great black monster, eager to exhaust its strength in a blind rush over the limitless plain. The sleeping Gauchos awaken with thought of marauding and murderous Indians from the distant hills, tempted to pillage by the presence of the herd. But the black sky and the first drops of the coming shower are recognized as warnings of a stampede. They rally to work, not to fight, and as they reach the herd they find the restless animals eager to break away in terror of the storm.

Four fresh riders, turning back the more eager animals, keep the herd in better order for a time, but with the first clap of thunder there is a wild stampede, and the great mass of animal life gallops over the black prairie

as if moved by a single impulse. A flash of lightning shows their heaving black forms and lowered heads, and the five Gauchos galloping sullenly beside them. The thunder follows quickly, and seems to shake big drops of rain from the clouds overhead. The cattle are in full stampede, and through the flashes of lightning that rend the dome of blackness, the cannonading of the thunder and the drenching downpour, the herdsmen press forward beside them. Experience has long ago taught them the impossibility of stopping the mad rush of terrified cattle, but by riding dangerously close beside the leaders they can turn the herd before it reaches the river. As the strength of the animals begins to wane, they are turned more and more to the right by the daring riders, who press the leaders closer and closer, and before the darkness of the storm gives place to the coming day the herd is rounded up, panting and exhausted, while the wet and

weary Gauchos are sleeping on the damp tuft-grass of the plain.

And what has this to do with the purchase of a pair of boots? At the killing round-up these animals are inspected, and all of suitable age and condition selected for slaughter. Of the hides some are shipped to Britain, tanned, curried, and returned across the ocean to the shoe-factories of Canada and the United States. Thus the Gauchos of the plains of Argentina galloping after the stampeded cattle help to make the pair of boots selected and bought by John Doe.

CHAPTER II

HOW OIL IS OBTAINED

Away in the north Atlantic Ocean all hands on a sailing vessel are eagerly hurrying to lower the small boats. They have been called up before daylight, the watch who have just been relieved as well as the others who have been sleeping, and the threatenings and abuse of the officers make every one work with eager energy. The lookout in the crow's-nest has sighted a shoal of whales, and his drawling, singing "blow" has aroused the whole ship to activity. He sees the bushy clouds of foam rising from the water, and announces a small "pod" of cows with two or three bulls to the north of them. Four boats are lowered with a run from the creaking pulleys, and the crews

slide down the ropes, every man to his place. Each boat hoists a sail as soon as it is clear of the ship, and the mate leads in the direction pointed out from the crow's-nest.

The harpooner stands in the bow, with a harpoon gun pointing forward, and pivoted so as to be guided easily in any direction. To the barbed missile in the gun is attached a manila rope about eighteen hundred feet long, which is carefully coiled into tanks so that it will pay out when a harpooned whale dives. There are also several lances — keen-pointed and edged spears about eight feet long — for killing the whales which have become exhausted in struggling under the torture of the attached harpoons. The boats separate, and are gliding along like small yachts in a contest of speed, when all round up at once into the wind and lie rocking on the swells. The look-out in the crow's-nest has signalled that the whales have gone down, and it is known that

the passing of a small boat over them would give the alarm and ruin the chance of killing them, or even seeing them again that day.

Soon the rising of the cloudlike jets of foam from the sea tells where the great monsters have risen to the surface. The boats are put about with but little noise, even the mate giving orders and uttering threats under his breath. A bull whale is lying near like a smooth, black island of flesh, and the mate's boat rounds from behind out of his range of vision. As the port bow bumps against the monster's side, the harpooner fires his barbed spear into the yielding flesh. The great mass suddenly becomes animated, and the boat's crew make desperate efforts to get out of danger. The whale rolls from side to side, writhing in convulsions, raising his gigantic tail into the air and lashing the water into foam with deafening blows. Suddenly he goes down, almost capsizing the small boat with the swell of his

descent. The line flies around the loggerhead until the first tank is empty and a large part of the second coil is out. Every effort of the harpooner to tighten the turns pulls the boat's head down and threatens to swamp her. The slacking of the line comes suddenly, and the crew begin to haul in, stowing the manila rope in a large coil aft. The mate stands with lance in hand and watches the water closely as the line comes in. When the great black mass rises above the surface, it is apparently as lifeless as it seemed when the boat stole silently upon it. The lance thrown by the mate sinks into the oily flesh up to the handle, as a knife sinks into soft butter, and again there is a lashing of the water and a dive, but more feeble than before. Again the whale comes to the surface, and after two more lances have been buried in his yielding flesh the signal is given to the ship that a catch has been made.

The other boats have been less fortunate.

One was smashed by a blow from a harpooned bull, and the crew were rescued after sitting up to their necks in water for half an hour, supported by the splintered planks, ribs, and thwarts. Another had to cut a line entangled on the loggerhead, to avoid being swamped, and the fourth failed to fix a harpoon, although near enough on two occasions to risk a shot.

A scaffolding of planks is rigged out from the ship's side, about five feet above the water, and the carcass of the whale is brought alongside below it and fastened by chain slings. The gigantic head is partly cut from the body with great spade-like knives about twelve feet long, which sink into the soft blubber of the whale almost with their own weight. After the under jaw is detached and hoisted aboard with groaning, creaking tackle, the body is attacked by men on the platform. Deep diagonal cuts are

made through its coating of fat, which is torn off by tackle in "blankets" about five feet wide and a foot thick, and hoisted on deck. Others are working vigorously in an endeavor to sever the head, and the chains and pulleys are operated from the deck to help them. When at last the neck is cut through, the head is towed astern, and the tearing of blankets of flesh from the body continues. After the carcass is stripped, it is cast loose to feed the gulls and other scavengers of the sea, and the strongest tackle is made ready to hoist the head aboard. The great mass is as big and as heavy as three full-grown elephants, yet the straining ropes and chains slowly raise it from the water and swing it on deck. A mass of fat is cut from the snout, and an opening is made into a cistern of pure spermaceti in the head, as clear as water. This is bailed into tanks, and the rest of the mass is hauled to the lee rail, waiting

till a roll of the ship takes it overboard. The blubber is cut in strips and fed into the try-works, great boilers for melting it into oil, and the men who stand by to feed it bail out the oil into barrels. The refuse that will not melt is the only fuel used, and the works are so constructed that there is no possibility of the fire reaching the oil. The work goes on for four days, and when the decks are scrubbed to their accustomed whiteness, and the casks stowed and lashed below, it is found that the whale has yielded forty barrels of oil.

These bullying and working officers and silently working men have been helping to make the pair of boots that John Doe bought. The oil they melted out was used in currying the soft upper leather, and their whale chase was a part of the process of shoemaking.

CHAPTER III

IN THE HEART OF A MOUNTAIN

An adventurous climber on a lofty peak in the Selkirks hears, when pausing to rest, a rapid, jarring pulsation in the heart of the mountain, like the ticking of a giant watch. The snow lying everywhere about is soft with the slow warmth of early summer, but it does not seem to melt or grow less. Down in the valleys the rocks are bare, and the few patches of soil watered by the mountain streams are green. The pulsations continue and invite an investigation. Away down the side toward the valley is a heap of broken rock, looking in the deep distance like a new excrescence on the ancient face of the mountain. On a nearer approach it is seen to be a large

irregular pile of broken stones scattered loosely down the slope. It is like a door-sill to a cavernous hole in the rock, from which a hand-car is pushed by a man in overalls and smock. The contents of the car are dumped over the face of this pile, to which it makes an imperceptible addition.

Let us light our wax candles and follow the miner who has pushed his empty hand-car back into the tunnel. We must stoop under the low roof, from which the water is constantly dripping, and follow the narrow rails as they curve along the damp tunnel. At one point a candle is burning in a steel ring, hooked on a small ledge of rock. Just under it is a black hole, and the light warns us of an open winze, one hundred feet deep, to a lower level of this extensive mine. Every sound seems to have many echoes coming from the solid rock overhead and all about. The light of another candle shows

two men drilling into the rock. One is holding and turning a drill, while the other strikes it with a sledge hammer, and we wonder at the long swinging blows he can strike, in a place where there is scarcely room to turn about. Farther along the main tunnel the miner is reloading his hand-car with the rock or ore that comes from an opening between some timbers standing from the floor to the roof. A few feet away is the skip, a small elevator for hoisting ore, but big enough for two to stand in if clinging closely to the rope. Up it goes with speed to the higher level, and here the secret of the mountain's pulsation is revealed. Three compressor drills are in operation, and each is shooting out a drill and boring into the rock at a speed that makes the sledge of the worker on the lower level seem tiresome in its sloth. Each drill pounds into the rock so quickly that a continuous stream of dust runs

from it. The power from this machinery is generated by a great steam engine down in the gulch, where air is forced into a large cylinder at high pressure. From this a pipe is laid up the face of the mountain and along the tunnel to the chief parts of the mine. This pipe is connected to the cylinder of the compressor drill, and the force of compressed air drives the drills into the rock with rapid blows. The air thus brought in also serves for ventilation, and makes life endurable in the narrow confines of the tunnels, shafts, and drifts. The skip rises to where other compressor drills are boring holes into the narrow roof.

The ore is in a vein from three to six feet wide, cutting through a part of the mountain. The tunnels are run along this vein, and during every shift or working period a part of the roof of each is honeycombed by the drillers. The holes are charged with

dynamite, and after the miners leave for their rest, the charges are exploded by an electric current. The ore thus detached is gathered up by the next shift, lifted by the skip or shovelled into the chutes as convenient, loaded on the small hand-cars, and pushed out on the dump. It is raw-hided down the face of the mountain, that is, tied in soft cowhide bags, and hauled by sure-footed mules to the station of a narrow-gauge railway, where it starts on its trip to the smelter. There it is piled in a heap on a layer of kindling wood, which serves to ignite it. After burning with a sulphurous flame, and giving off stifling fumes for two or three weeks, it cools off and is charged into the smelting furnace, mixed in layers with coke. This is ignited, and the heat is intensified by blasts of air till it pours out in a red molten stream. It falls into another furnace, where the fire still keeps it in a liquid mass. The metal sinks

to the bottom, while the melted rock and other waste flow off from the top and are carried away in fine black crystals by a stream of water. From an opening in this furnace the metal, at blinding heat, crawls out into hollows in the ground, where it is allowed to cool. It is then called matte. There are several other furnaces, some burning coal, others coke or wood, through which it must pass before it is cast into conveniently sized plates of yellow metal. These plates are the anodes, which are shipped away to the Atlantic seaboard, where a supply of ingredients from other mines in other parts of the world facilitates the refining processes. There the gold, silver, and copper are finally separated. The copper goes to a brass foundry, where it is mixed with zinc from Cartagena in Spain, and made into brass. From this brass were made the long nails which appear as regular rows around the

heels of the boots purchased by John Doe after selling his wheat. The miners in the heart of the mountain were unconsciously helping to make boots.

CHAPTER IV

MAKING BLEACHING POWDER

WITHIN high walls and surrounded by buildings, sheds, and tall chimneys in a Lancashire town, half a dozen strange-looking men are shovelling a whitish powder from heaps on the paved ground into large barrels. These men have flannel cloths wound many times over their mouths and noses, and above these muzzles, which make their heads appear distorted, are goggles which hide and protect their eyes. Their feet and legs are also wrapped in flannels, and they are so clothed as to look like moving bundles of rags. One of them shouts, "Roger is coming," and all drop their shovels and run helter-skelter, while behind them a strange

green fog or mist is carried along by the wind. When this fog disappears, they return, laughing and joking, to their work, as if there was no danger or discomfort in it. The green fog is deadly gas of chlorine, which, pumped on slaked lime, changes it into bleaching powder, and while the packers are certain to contract asthma and other diseases, they are also liable at any time to be caught by the deadly gas which they nickname "Roger." To breathe it is almost invariably fatal, and the victim is carried to his home, where he dies in a few hours. In spite of the protection of flannel and goggles the gas and powder cause many distressing ailments, and shorten the lives of the workers. The shovellers must leave their work every few minutes to get a breath of fresh air.

In another part of the works are men laboring before great furnaces. Each has a large bunch of oakum in his mouth to keep

him from inhaling the poisonous gas escaping from the salt cakes, which he is turning and drawing from the glaring, heated aperture. With two towels he manages to wipe the perspiration from his face, one towel being in use while the other is drying, and there he works in the heat for eight hours with scarcely a minute to snatch a bite of food. The work of the salt-cake men consists in baking common salt and treating it with vitriol to make muriatic acid, such as tinsmiths use in soldering. They can be recognized anywhere by the effect of the poisonous gases they are compelled to breathe, which not only destroy the lungs, but attack the teeth, causing them to decay rapidly and fall out. A salt-cake man has no teeth, or perhaps a few blackened stumps remain, and as he is unable to chew his food, indigestion as well as diseased lungs adds to his afflictions. The effect of this work is noticeable in less than a year.

In another building are men shovelling slaked lime, turning it over and over until it is finally loaded into the lifts that convey it to a chamber where it is treated with chlorine. The white particles of lime are in the air all about them, and here again each has a big bunch of oakum in his mouth to prevent him inhaling the irritating and burning dust. At this they can work only twenty minutes at a time, with a short interval of rest, for a shift of seven hours. After the day's work they wash themselves with oil or tallow, for the application of water to their faces or hands, with every pore filled with lime, would cause terrible, if not fatal burning. At this work there is a tendency to many diseases always associated with the handling of lime, and blindness from the alkaline burning is not uncommon.

On each side of a long corridor are small sheds which seem like infirmaries for the victims of the deadly gases and the corrosive

acids and dusts of the works. In these sheds are the half-blind victims of lime-shovelling, the asthmatic and decrepit packers, the toothless salt-cake men and the used-up vat men, barrow men, and general workers. There they sit day after day, breaking the stones from which sulphur is to be extracted, and the click of their hammers has won for them the jocular name of the hand-bell ringers. This is the last occupation about the works, and as the men weaken at it, they are removed to the workhouse, their places being filled by others unfit for the more arduous occupations. These men are not old, for the work is such that they seldom or never live to an advanced age. Every branch of the work is dangerous and destructive. They are obliged to clothe themselves in woollens, as the gases would destroy cotton or linen in a few days.

But in enduring these hardships the workmen have been helping to make the pair of

boots which John Doe purchased. The bleaching powder was used to whiten the linen lining, and the muriatic acid was used in combination with other chemical agents in separating the copper used in making the eyelets, hooks, and nails.

CHAPTER V

GATHERING INDIA RUBBER

In a dense jungle by the Amazon River a half-naked Brazilian native is chopping his way through the close luxuriant foliage. He swings his great knife with vigor and energy, chopping off the stems and stalks that impede his progress, and gradually forcing his way in the twilight of the perpetual shade. The rank vegetation under his feet makes a covering for the wet soil, and he looks strangely diminutive under the giant palms, ferns, and other growths of the moist tropical climate. A large gourd is slung over his shoulder, and with every move there is a clicking and rattling within it. The sound seems a break in the utter loneliness of his slow march. He

finds a large, robust tree, and proceeds with easy deliberation to chop off the outside bark. With his small axe he smooths a part of the surface and makes a deep cut into the inner bark, from which a creamy milk begins to exude. A small earthenware cup is hung below the cut, and before he leaves, the tree has half a dozen suspended around it, each catching a slowly oozing thread of milk. He cuts his way through the foliage to another tree and repeats the operation, leaving another circle of cups catching the liquid. When some twenty trees have been tapped, he returns to the hut which he has built of the great leafy vegetation all about him, and eats his lonely meal. In the evening he starts out to gather the cups and empty them into the gourd, when he finds he has about a gallon of the milk as a result of his first day's work.

Next morning he starts out again, and cuts another series of gashes in each tree, a little

lower than the first. The cups are again hung to catch the milk, and in the evening it is gathered into the gourd. Three or four days are thus spent in collecting, and when the gourd is nearly full, the work of drying commences. For this purpose a smoking fire is built in the hut, the fuel being the nuts of some adjacent palm trees. A clay funnel is placed over the fire so as to exclude all draft and produce a steady smoke, and the native commences operations by dipping a large wooden paddle into the gourd, and waving it in the ascending smoke. The clinging milk rapidly coagulates, and the paddle is again dipped into the gourd and held in the smoke. With each new coating of milk the quantity of rubber clinging to the paddle increases, and the native works away, blinking in the ascending column of smoke. When a large cake of rubber has accumulated on the paddle, a cut is made along one of the edges and the mass is peeled off.

The process is repeated till all the milk in the gourd has been transformed into black moulds of rubber, and the native starts out to tap the trees for a new supply.

When he has accumulated as many moulds of rubber as he can carry, he tramps back to the house of the merchant and landowner who has supplied him with the utensils of his work. The moulds of rubber are weighed and credited to his account by the merchant, who is at once his landlord, employer, and selling agent, and he starts back into the jungle with a fresh supply of food and other necessaries. The merchant also supplies his wife and family with such things as they require, and the account goes on unsettled from year to year.

This man struggling through the dense jungle, often suffering from the fevers that lurk in the swampy exhalations, is also helping to make the boots purchased by John Doe. The rubber which he collects is shipped to

England, or New York, and is subjected to various manufacturing processes according to the use for which it is intended. Some of it is used in making the cement or paste that unites the linings and facings in this pair of boots. John Doe knows nothing of the work of the native, amid the rank vegetation of the Amazon, and he in turn has no knowledge of John Doe and his boots. Yet the one has been working to furnish the other with the article he requires, and both are parts of the intricate commercial and industrial system which enables us to live by satisfying each other's wants.

CHAPTER VI

IN A SHOE FACTORY

Among whirling, jarring, and pounding machinery, with the smell of leather in the air, a score of men are busy in the unchanging monotony of factory work. The windows look out on brick walls, crowding closely around, showing that it is in the heart of a city. Near at hand a workman places a side of heavy leather on a long table and selects from a shelf a great punch or die, shaped like the sole of a boot. Over the table is a beam steadily rising and falling with the motion of the machinery. The die is placed on the leather, and as the beam descends it forces it through, seeming not to feel the resistance of the hard material. The workman dexterously shifts the

die over the surface of the leather, and every time the beam descends a boot-sole is punched out, until the hide, a skeleton hanging by slender threads, is thrown to the floor and another is placed on the table. The remnants of the hide are passed to a man standing before an up-ended log, resembling a butcher's block. He has a die the shape of a boot-heel, and all day long he swings his heavy mallet, cutting heel pieces from what remains of the heavy hides. The soles are carried in bundles to a boy who passes them through a noisy little machine that pares them down to the required thickness, and the heel pieces go to an energetic-looking machine that rushes them into a mould, and fastens them together roughly in the shape of finished heels. The scrappy remnants of the hides pass on to other workers, who select pieces suitable for various internal parts of boots and shoes. These pieces are passed through other machines which multiply them

by splitting, pare off their edges or otherwise shape them for their various uses.

Thus a score of workers go on day after day, turning out soles, heels, and other heavy parts, in many forms and from many qualities of leather. Even the finest scraps and parings of leather are not wasted, for they go on to a grinding machine where they are reduced to powder. This is mixed with a gummy substance and pressed into forms for filling between the soles, and for other parts not exposed to wear.

On the floor above, the scene is entirely different. Among the busy workers there are more girls than men. The leather used is light and fine, for the flexible and ornamental parts of footwear. Some operators are working on canvas and other cloth fabrics. The workers sit in rows before long benches, dexterously cutting both leather and cloth according to peculiar shaped patterns, so queer and varied

that it seems hard to believe they could ever be made to fit a human foot. There are some buzzing machines that pare down these lighter pieces of leather as they are rapidly passed through by trained fingers. These peculiar patterns in leather and cloth are tied in bundles and passed to the next floor above, where the noise of running machinery is much more persistent. The great room is crowded with girls seated in rows, before sewing-machines which seem to have grown into various distorted forms. Some of these machines have two needles and sew a double seam. One has a needle that wobbles back and forth and makes a zigzag stitch, while another has a small knife that dances up and down beside the needle and trims the edge of the leather. A noisy machine has a small hammer that pounds down the edge as it is turned over. These machines seem to have twisted themselves into various forms, as me-

chanics sometimes curl up to work in corners or other difficult places.

One very intelligent-looking machine cuts a button-hole in the upper of a lady's shoe, throws out the piece, and runs around the edge with two needles, one above and one below, finishing it with close stitching over a strong border of twine. With this machine a girl can cut and sew five hundred button-holes in a day. On the top is a dial which registers the number of stitches it makes, and the owner pays the inventor for the privilege of using it according to the record of work done. Another machine sews on buttons, which are thrown carelessly into a hopper. Each plunge of the big needle sews on a button, and the needle comes down as fast as the seconds are ticked off on a watch. Eyelets are driven through and clinched by another machine that selects the little brass tubes, turns them the right way, and finishes them in the leather, so fast that the punching

makes a noisy rattle. In this room the queer-shaped pieces arriving in bundles from the cutting-room are passed from hand to hand, and from machine to machine, till they finally emerge in the form of uppers ready for soling.

These pass to the lasting-room, where the smell of wax and moist leather recalls the old-time shoemaker's shop. Here the soles, heels, and uppers are brought together and take form in the finished boot. The soles are passed through machines that trim and form them for the various shapes and sizes required, and groove and mitre the edges for sewing. The leather is softened by water, and soles and uppers are put together on wooden lasts, most of the work requiring the strong hands of men. A machine with many long deft fingers holds the edge of the upper down over the sole, while another machine nails the parts in position. The united parts are passed to other machines that sew the soles

and uppers together. When this is done inside out, a sturdy machine is used to turn them after the lasts are withdrawn.

There are machines that sew the sole and upper together, that carry and sew on strips of leather, that nail on a heel with one stroke, and that drive pegs which are cut from wire fed in a coil. Some machines drive one and two rows of pegs or nails so fast that they cannot be counted. A workman stands before a sole-polishing machine with a lever in each hand, which he moves this way and that, the boot and polishing cylinder following his motions. In all parts of the room are frames or racks loaded with boots in various stages of the lasting process, and ready to be wheeled from one machine to another. The whirling cylinders that trim off the soles and heels resemble wood-working machinery, and the workmen stand in a cloud of flying powder and small particles

of leather like the sawdust in a lumber mill. These machines cut, trim, sandpaper, polish, burnish, and perform many other operations, each under the guidance of a separate workman. Each machine and each operation has a distinguishing name, and so has each of the numerous parts that go to make up a finished boot. In the trimming and polishing of the edge of the sole, a boot passes through the hands of four workmen. The heel, after being nailed on, is cut into shape by whirling knives, ground by sandpaper on wheels, inked, burnished, polished, brushed, and subjected to various finishing processes before the revolving shafts, wheels, and brushes. After the nailing, which is done in strong, irresistible pressure, the heel receives the attention of six workmen. Some operate on a heel several times, with others alternating, so that it is passed from hand to hand fifteen times before it is finished. In

each operation a workman has so many boots passing through his hands that he learns to move with great speed and dexterity. Fully fifty of these workers have helped directly to make the boots bought by John Doe. Each has done his or her part to transform the various kinds of raw material into a shape serviceable to man, and the result of these concerted efforts is a pair of boots, to John both pleasing and serviceable.

CHAPTER VII

THE LAW OF SUPPLY AND DEMAND

We have seen but few of the many workers who have been busy in all parts of the world, preparing and shaping the material for John Doe's boots. Scores of other trades and occupations have done their part of the work. The machinery of the factories, the tools of the miners, the whaling ship and all its complicated parts, the locomotive engine rushing across the continent, all have come into existence by the labor of many hands guided by many minds. Looking back still further, we find each of these workers requiring tools and material supplied by many others. The shoemaker requires leather from the currier, who requires hides from the tan-

ner and oil from the refiner. The tanner obtains raw hides from the butcher, who obtains his cattle from the drover, his knife from the cutler, and his block from the lumberman. The cutler depends on the iron founder for his blades, and on the dealer in horn or foreign woods for his handles. The iron founder requires coal from the miner, and thus every line of material can be traced back through an increasing number of industries to the point where every worker drew his supplies directly from nature's great storehouse, which economists call land. The term "land" is used to mean not only the surface of the ground, but all that is beneath or above it, the minerals and forests, the water and its wealth of living creatures; in short, all nature's free gifts to man.

All the world's wealth is taken from this great storehouse by human labor, and will be returned to it again by the laws of nature.

Some wealth returns to the land in a few days, some in a few months, a few years, or a few centuries. Workers in different parts of the world, knowing nothing of one another, were unconsciously coöperating toward the production of a pair of boots for John Doe, and yet they seemed to produce the right quantity of each line of material used. One would naturally suppose that there would be too much leather, not enough cloth, or some great error as to the amount of oil required for currying. If only one pair of boots were required, the regulation of the supply would be comparatively easy, but no one knows how many pairs of boots will be wanted, nor how many other uses will be found for each line of material.

This intricate problem of regulating the supplies solves itself without the intervention of governmental authority. It is natural for men to seek the best rewarded occupations,

to satisfy their desires with the least exertion. In Canada it is possible to grow oranges under glass, but nobody does so, because it requires less labor to grow apples, sell them, and buy oranges with the money received. That is satisfying the desire for oranges with the least exertion. The same rule of conduct regulates the supply of all the material used in making John Doe's boots, and the supply of all other things required for human maintenance or comfort. The owner of a great copper mine studies the requirements of the world in that particular line. He knows the output of all the important copper-producing districts, and the wants of the leading markets. If his mine contains rich ore, he keeps on producing, even if an excessive supply causes a fall in price. But if he owns a mine that barely pays the cost and risk of working, he cannot stand a fall in the price of copper. If there is more copper than is

required for the nails of John Doe's boots and other similar uses, the price of it is certain to fall. The copper becomes available for coarser or cheaper uses. Copper nails are used in cheaper work than formerly, and it is the cheapest or marginal utility that determines value.

In Australia, when water is scarce and can be used only for drinking, it is valued according to that use. When it becomes more plentiful, and some can be used for washing, it is all valued according to that more extended use, whether required for washing or drinking. It is the same with copper and all other things bought and sold. If the mine-owner who is making small profit sees a prospect of too much copper, he knows the cost of mining will be greater than the price he will receive. He tells his workmen that they must work for lower wages or he will be obliged to stop mining. The workmen hear

that the whalers have great difficulty in getting crews to man their vessels, and are paying high rates to all who will sign for a voyage. With the excess of copper for the nails has come a scarcity of oil for currying leather. More vessels have been taken for whaling, and there is a demand for men. The workers in the mine are not willing to accept lower wages than are offered in the seaports, so they leave the mine, and ship on the whalers. There is thus a reduction in the supply of copper and an increase in the supply of oil, adjusting the quantity of each to the needs of the people. In this way the natural desire of man to adopt the most remunerative employment adjusts the supply of every line of goods to the demand. It is not necessary for all miners to leave for the whale fisheries to counteract an abundance of copper and a scarcity of oil. A few workers here and there, crowded out of the one occu-

pation and tempted into the other are sufficient to restore the balance between supply and demand. If there should be an abundance of sole leather and a scarcity of upper leather, sole leather will be devoted to a wider range of uses, and the fall in price will make its production less profitable. The tanner will find it more to his advantage to increase the output of the scarcer kind of leather, and by thus following the natural rule of human conduct, he will adjust the balance of supply and demand.

Tanners and other manufacturers do not wait for a change in prices to determine which lines they will restrict and which they will increase. They watch the market closely and study the course of every change likely to affect the price of their wares and their material. By attention and judgment they are able to anticipate many of the influences that would tend toward a change in prices, and counteract

them by varying the supply, thus preventing the changes from taking place. The Gaucho of the southern plains finds no demand for his services as a herdsman, but an opening for renumerative work in the wheat fields. He does not know the reason, but following the natural impulse, he leaves the saddle and takes to the seed-drill and reaping-machine. The cause may be found in the British food market, where the prospect of a shortage of wheat has induced speculators to promise to buy it at a high price on a future date. This has stimulated wheat-growing. At the same time the prospect of an abundance of beef has tended to discourage the herdsmen. The young Gaucho on the plains, by turning from one occupation to another, has unconsciously done his share to restore the balance, to produce that which was scarce and lessen the supply of that which was abundant. This shows the working of the law of supply and

demand, a natural law which enables the productive workers in all parts of the world to contribute toward a unity of results, unknown to one another, and without even knowing the results toward which they are aiming. Every excess of goods is checked, and every shortage made good, by the natural tendency of man to seek the most productive lines of industry, to satisfy desires with the least possible exertion.

CHAPTER VIII

TAXATION

When John Doe pays for the boots, he is paying taxes, although, if he has never studied economics, he may be entirely ignorant of the fact. The merchant is required to pay taxes to the city treasury to be expended in keeping a fire-protection service, a police force, parks for recreation, schools, and many other things for public use or convenience. These taxes are levied according to the value of the store and the value of the stock which includes the pair of boots. The merchant is obliged to pay this out of the profit on the boots, and as that is increased to the extent of the tax by an increase in the price, John Doe is really paying a share of the merchant's taxes. Every other

merchant has to pay a similar tax to the city, so none could afford to sell at a lower price. Wherever John Doe may go to buy his boots he will be forced by the price demanded to make a contribution to the city's treasury. The city authorities have other methods of levying on him. The merchant requires a service of city water in his store, and for that he is in some cases charged more than it costs. The profit goes to the city treasury, and is in reality a tax levied on the merchant. That is also shifted on to John Doe's shoulders by the necessity of charging a still higher price for the boots. The carter who carries the boots from the freight shed at the railway station in his ponderous wagon is obliged to pay a license fee to the city. That fee, though small, is added to the charge for carting the boots, and all other things moved by licensed carters, the license being part of a scheme for establishing a regular charge for such services. It

increases the cost of the boots to the merchant, and is finally paid by John Doe in the price asked by the clerk behind the counter. The company supplying electric light to the store is obliged to pay a large sum to the city for the franchise or privilege to go into business. The understanding is that the company will recoup itself in its charges, and the merchant who sells the boots is compelled to pay proportionately for his light. That charge, as a part of his expenses, is added to the price of the boots, and the city authorities, by levying on the electric light company, compel John Doe to pay still another tax. The public services for which these taxes are levied are really rendered to John Doe in common with others who live or do business in the city.

There is one tax levied by the city on the merchant's premises, which does not increase the price of the boots, and that is the tax on the land on which the store stands. It may

seem peculiar that while a tax on boots, houses, electric lights, and all products of labor makes them dearer, a tax on land makes it cheaper. Richard Roe, who owns the land on which the store stands, is charging the merchant a regular rent for the privilege of maintaining the store there. The amount he can charge depends entirely on the location and its surroundings, as these affect the chances of doing business. In a small village the amount would be proportionately small, and to avoid the bother of paying, the merchant would probably buy the location. If the village grew to a town, the owner of a lot on the business street would find himself able to secure a much larger revenue from a merchant or manufacturer wanting to build a store or factory on it. And if the town should grow to a city, the same owner, though he might have lived in a distant country, would find himself wealthy.

He could secure a large income by merely allowing some merchant to build or maintain a store on his lot. In Toronto there are small patches of land for which the owners obtain as high as $100 a foot frontage every year, and in New York and London the land rents are far higher. Land has sold in Toronto at the rate of $1,250,000 per acre, in New York at $15,000,000 per acre, and in London sales have been effected at $20,000,000 per acre. The city levies a tax on land, but that does not enable the owner to charge any more for it. A tax on boots enables the owners to increase their prices, not merely because they want to do so, but because the tax makes boots more difficult to obtain. It increases the cost of producing boots, makes them scarce, lessens the supply, restricts their use, and in consequence makes them dearer. A tax on land cannot lessen the supply, because that is fixed

by nature, but it increases the available supply by making the holders of vacant land more anxious to offer it for sale. However eager a landowner may be to increase his rent when the city increases his taxes, he cannot do so, as the taxes cause other owners to offer land on more reasonable terms. Richard Roe is getting, say, $2000 a year ground rent from the merchant who owns the store where John Doe bought the boots. The city might take one-half, three-quarters, or even the whole of this amount in taxation every year, and Richard would not be able to charge the merchant any more, neither would the merchant be able to charge any more for his boots. The rental of the ground is generally fixed for a term of years, but even when bargaining for a renewal of the lease the tax would not enable Richard Roe to obtain an advance. The rent he can charge depends on the value of the site for business

purposes, and no matter how much of it the city takes, he cannot obtain any more. If he were getting $2000 a year, he would probably sell his lot, if so disposed, for $40,000. The value of land is always estimated from the income present and prospective, and, at 5 per cent per annum, a lot yielding $2000 a year would be worth $40,000. If the city took half the income in taxation, leaving him only $1000 a year, he would be willing to sell his lot for $20,000. If three-quarters of the income were taken by the city, leaving him only $500, he would be willing to sell out for $10,000; and if the city took the whole income, the lot would have no selling value. That is another explanation of the way in which the taxation of land makes it cheaper.

The land tax must remain a matter between Richard Roe and the city, and cannot affect the price of John Doe's boots. If the land on which the store stands belongs to the

merchant himself, whom we will call Henry Foe, the same principles operate. Henry Foe obtains the full advantage of his good location, but instead of handing the value of it over every year to Richard Roe, keeps it himself. The city may take this rental value, or any part of it, from him in taxation, and he will be no more able to advance his prices than if he paid it to Richard Roe, or retained it himself. The only effect of the tax is to alter the destination of his money.

John Doe has borne many city taxations although he is not a resident of the city, and he has to pay the taxes levied by his own township, and spent in making roads, building bridges, maintaining schools, and supporting the township and county councils. But in the mutual relations between the city and the country, these apparent injustices in taxation are adjusted. If John Doe must buy boots subject to city taxation, the people of

the city must buy produce from the country. The tax on the boots, like every other addition to the cost of a farmer's purchases, has a tendency to increase the price of farm produce sold in the city. The competition in every line of industry thus tends to confine the burden of every tax to the district over which it is levied. Although it cannot be asserted as an absolute rule, it is generally true that the people of each municipality, each province, state, or nation, must bear their own taxation, however ingenious may be their efforts to shift it onto outsiders.

But we have not yet reached the end of John Doe's taxation bill in regard to the boots. He must pay to the state for the maintenance of the civil courts, the care of the blind, the deaf-mutes, and the insane, as well as for the general administration of state or provincial affairs. The merchant is not willing to take the risk of a fire destroying

his stock, so he has it insured, the premium charged by the company being estimated as a part of his expenses. It must be met from the profits obtained on his sales, and is in consequence one of the items that go to make up the price of the boots bought by John Doe. The state imposes a tax on the insurance company, and in that way John Doe pays a part of it, which reaches the provincial or state treasury through the merchant and insurance company. In the course of business the merchant requires an occasional advance of money from the bank, and the charge for such accommodation is also regarded as a part of his running expenses. It is enhanced by the state tax on banks, which is in the same way paid by John Doe in common with the merchant's other customers.

National taxes are numerous. The canvas used for lining the boots is taxed by a customs officer when brought into the country,

and its price to the manufacturer is proportionately increased. This increase, with an added profit on it, is paid by the merchant, and finally, with another profit, by John Doe. The nails in the boots are taxed the same way, the tax being finally shifted to John Doe. The thread with which the boots are sewn and the wax used on the thread are also taxed in the same way by the national authorities, and John Doe is made to contribute the combined amount. The leather has been subjected to import taxation and its price consequently increased, the amount of the increase also appearing in the final price of the boots. The India rubber, the many component parts, as well as the machinery used in the various processes of manufacture, are, with few exceptions, subjected to taxation, which is finally contributed with added profits by John Doe.

The finished boots have not been subjected

to import taxation, for they have been manufactured in the country. Federal taxation is levied on such things when they enter from other countries. But the manufacturer is enabled to recoup himself, for the accumulated load of taxation which he has paid, by the tariff, which prevents John Doe or any merchant with whom he deals from importing boots from other countries. The tariff imposes a tax on imported boots of about one-third their value, so it pays John Doe better to buy the products of local manufacture, and pay not only the accumulated taxations on the material, but an additional amount which the manufacturer is enabled to obtain. The tax on imported boots enables the manufacturer of boots to advance his prices to the level of the cost of foreign-made boots with the duty added. That enhances the price John Doe and all other boot-buyers must pay, and the system is continued to encourage the local manufacture

of boots. Those who favor it think that the advantage of having boot and shoe factories in active operation within the taxation area more than compensates for the extra price paid. Opponents of the system contend that the loss must always be greater than the gain, and that with freedom to buy in the cheapest markets, the most profitable industries only would be established — their products being exported to pay for other things required. People can obtain boots by manufacturing them, or by making or producing some other article to give in exchange for them. When free from legal obstructions they will adopt the method which gives the boots required with the least expenditure of labor.

CHAPTER IX

JOHN MUST PAY FOR THE BOOTS

We have now reached the most difficult part of this complicated transaction. We have seen how people in every quarter of the globe, unknown to one another, did their part in the many processes necessary to the making of a pair of boots for John Doe. It is now necessary that John should pay each and every one of them for the services they have rendered him. His own contribution to the wealth of the world is made by growing wheat, but it would be impossible for him to send his wheat all over the world to pay every one who has helped to make the boots. And even if it were possible, many of them would not want the wheat, and would not be willing to give

anything or render any service for it. But John must pay every one of them, and pay them by growing, reaping, and threshing wheat. He must pay the Brazilian who cut his way through the jungle by the Amazon, the Gaucho who galloped through the night after the stampeded herd, the men who suffered the torture of the alkali works, the miners who drilled deep shafts in the mineral-laden mountains, and the smelters who sweltered in the glare of the furnaces, the whale fishers, tanners, curriers, and busy workers in the factory, even to the clerk who parcelled up the boots and handed them over the counter. Under primitive conditions every man made the things he required from the material supplied by nature. Every process was necessarily slow and laborious, and continuous work supplied only a few necessities. But men found that greater results could be accomplished by confining their efforts to the making of special classes of goods and ex-

changing to secure the variety of things needed in daily life. With the Esquimaux and uncivilized Indians each is his own shoemaker, weaver, boat-builder, tool-maker, tailor, hunter, and fisher. In a more advanced stage we find a weaver, a tailor, and a shoemaker located in a farming district. These men do not plant wheat and vegetables, but devote all their time to their special trades, thus acquiring a skill and deftness that greatly increase the product of their labor. The farmers and gardeners also confine their attention to their own lines of work. They give grain and vegetables to the weaver, and in return he spins their yarn into cloth. They give food products to the shoemaker, and in return he gives them shoes, also to the tailor who makes their webs of cloth into clothing. By each producing one kind of goods and exchanging with the others, all obtain vastly more than under primitive conditions in which each did everything for himself.

The farmer, weaver, tailor, and shoemaker illustrate a rudimentary separation of trades. The principle can be followed till there are an infinite number of distinct occupations, till one man no longer makes a boot but only puts on a heel or smooths off a sole, till the weaver no longer operates his loom but attends to some piece of machinery in a great factory, till the farmer no longer cards and spins wool into yarn but turns the fleece over to the factory, where it passes through many hands, each trained to dexterity in one operation, before it becomes yarn for weaving.

In the separating of trades and the exchanging of products a difficulty soon develops. Suppose a tailor wants a pair of shoes. He applies to the shoemaker, who may not want clothes. If the shoemaker wants wheat, the tailor cannot get the shoes he wants unless he can find a farmer wanting clothes and willing to give wheat for them. The tailor can then

exchange clothes for wheat, take the wheat to the shoemaker, and obtain the boots he wants. In city newspapers we often see advertisements for barter. Some one will want to trade a bicycle for a sail-boat, or a shot-gun for a sewing-machine. It is always rare and difficult to find anyone having the thing desired and wanting to exchange it for the thing to be parted with. This difficulty is overcome by trading in some article universally desired. The tailor wanting shoes does not seek a shoemaker wanting clothes. He trades the clothes for some article that every one wants, and takes it to the shoemaker, the gardener, the boat-builder, the gun-maker, and every one else who produces anything he wants. The shoemaker trades his shoes, not for the particular things he wants, but for something every one wants. With this article, in universal demand, he can secure all the purchasable things he requires. The farmer, too, trades

his wheat for something in universal demand, and for that he obtains the shoes, clothing, and furniture, the houses, pictures, books, and other things needed for his maintenance or comfort. The man who wishes to trade a shot-gun for a sewing-machine will generally find it to his advantage to trade his shot-gun for some article in general demand, which he can trade at any time for a sewing-machine. The unity of thought or impulse that leads people to fix their desires on some few articles makes such trading possible. These articles are generally personal adornments.

With the Indians of the Great Lake regions it was wampum, a ringlike bead made from a shell found on the Gulf of Mexico. These shells were carried to the northern country, cut into strips by slow labor with primitive appliances, then cut into squares, drilled, and rounded. Such beads were highly prized as personal adornments, and the Indian who had

a belt covered with them was indeed distinguished. Indians would trade any article of value they did not need, for wampum, and with that they could buy whatever their tribesmen had to sell. With more civilized tribes and races gold and silver were used for the same purpose, and the general desire for these metals makes them available for a similar commercial use at the present day. When a tailor wants shoes he does not search for a shoemaker wanting clothes, but he trades the clothes he makes, with any one who will give gold or silver for them, knowing that any shoemaker will be glad to give him shoes for the precious metals. The farmer, too, trades his wheat for gold and silver, and for these metals he obtains the clothing, tools, books, pictures, and furniture, the building material, the services of carpenters, harvesters, and laborers, everything available that he desires. All other producers trade in the same

way, giving their products for gold and silver, and then giving those metals in return for the things desired.

Using the precious metals in that way, men soon saw the inconvenience of weighing them and testing their purity. To obviate those difficulties, the precious metals were stamped or coined into pieces of a uniform weight and a uniform degree of purity. Governments, in coining gold or silver, testify to the weight and purity of each piece, thus saving people the trouble of weighing and analyzing for themselves. In remote mining regions the gold still circulates occasionally in a rough state, each merchant weighing for himself, but coining or the use of coins is universal with civilized countries. Other metals are always mixed with gold and silver to harden the coins and prevent loss by wear, but the exact proportion of such cheaper metal is always known.

CHAPTER X

COINS AND CURRENCY

WHEN John Doe paid for the boots he did not give coin but a five-dollar note issued to the First National Bank of New York by the National Government. On the note it was set forth: "The First National Bank of New York will pay the bearer on demand Five Dollars." That promise was further guaranteed as follows: "This note is secured by bonds of the United States, deposited with the United States Treasury at Washington." John received in change a silver certificate bearing the inscription: "This certifies that there has been deposited in the Treasury of the United States One Silver Dollar," and also: "One Silver Dollar payable to bearer on demand." He also received a silver coin stamped: "Quarter Dollar." Instead of the silver certificate he

might have received a treasury note of the United States payable in coin, which might mean gold or silver; or a greenback, so called on account of the color of the design on the back of the first notes issued after the outbreak of the war. The dollar of his change might have been paid in a big silver coin of that designation.

All this seems very complicated and in no way connected with the exchange of goods for gold weighed on delicate scales, or even with the exchange of goods for coined gold, but the same principle underlies the use of money in any form. The simplest use of money is the trading of goods for wampum or gold dust. From that the progress is easy and natural to a system under which the precious metals are made into coins of uniform recognized weights. The next step is to a paper currency based on one of the precious metals, a system in use in Canada, and as it is extremely simple it should be investigated first.

In Canada John Doe would have traded his

wheat for a number of crisp notes, each setting forth that the Canadian Bank of Commerce would pay to bearer on demand five dollars. One of these he would have given to the merchant for the boots, and he would have received in change a note bearing the inscription: "The Dominion of Canada will pay the bearer on demand One Dollar." The silver coin received would bear no promise of payment, the inscription merely designating it as twenty-five cents. It may be well to begin an inquiry into this peculiar exchange of printed promises, by explaining what is meant by the term "dollar." It was originally the popular name for a large silver coin, but in this connection it is a standard of weight used by the Government in weighing gold for coinage, as the carat is used by jewellers in weighing diamonds, the ton by merchants in weighing coal, and the drachm by chemists in weighing drugs. It is equal to 23.22 grains, so that when the Bank of Com-

merce agrees to pay the bearer on demand five dollars it agrees in reality to pay him 116.1 grains of gold. When the Dominion of Canada, in reality the Government representing the people of the Dominion, agrees to pay one dollar, it agrees to pay 23.22 grains of gold. If John Doe had wanted to get the gold in place of the boots, he would have taken the five-dollar note to the bank and obtained an American five-dollar coin called a half eagle. This would contain 116.1 grains of the precious metal. The notes are issued of the same denominations as the coins, to make payments easy. With the gold coin in five-dollar and ten-dollar pieces it would be impossible to pay a note for four and three-quarter dollars, or any other fractional amount. The bank would be under no obligation to pay gold, notwithstanding the direct promise printed on its note. The Canadian law makes the notes issued by the Dominion Government, one of which John Doe

receives in change, a legal tender, that is a legal substitute for gold. If John Doe went to the Bank of Commerce to get the gold according to the promise on the note, the clerk could legally refuse to give it to him, and could redeem the note or discharge the obligation by giving him five one-dollar notes. John would be obliged by law to accept these in payment of his demand, but he could take them to the office of the Deputy Receiver General, a government official, and obtain in the form of a coin the gold promised on the face of them. The law making these Dominion notes a legal tender compels all creditors to accept them in payment of debts, but it is because the Deputy Receiver General is ready at all times to redeem them in gold that people are willing to receive them in payment for goods. No man would give his wheat, his boots, or his clothing for these printed promises, were it not that the Government stands ready to redeem them in

gold. This is made clear by a study of the nature of paper currency.

When John Doe sells his wheat he does not want to carry gold about with him to buy the things he wants, provided he can be safely assured of getting it when he wants it. The buyer of his grain might give a written promise to pay him at any time or to pay anyone else but John would not have sufficient confidence to trust him. John wants a promise that he will consider as good as the gold, and that other people will have equal faith in, and will be willing to accept instead of gold. The printed promise of the Bank of Commerce to pay gold on demand is just what he wants. When he holds such promises rolled up in his pocket, he knows he can get the gold for them at any time. If he gave one at the store, the merchant would unhesitatingly hand him the pair of boots he wanted, and give him some change also. He knows every one will be

eager to obtain such printed promises, and willing to give goods for them.

Why is there so much confidence in the Bank of Commerce? Why is there the same confidence in the printed promises of all Canadian banks; for it is but one of several? Take one of these bills into the United States, away from the boundary cities, and merchants will refuse to give goods for it. But the people of Canada have faith in the banks because their financial condition is investigated by the Government. The banks are obliged to publish a statement every month, telling how much they owe and how much is owed them, how many of these printed promises are outstanding, how much gold and how many government notes they have to meet such promises, and all things of importance regarding their financial standing. It is also a provision of the law that a bank cannot be incorporated with less than $250,000 in gold

or its equivalent. If John Doe refers to any of these bank statements he will find that no bank has sufficient gold and Dominion notes to meet all its outstanding promises to pay on demand. If all a bank's notes were brought at once and payment demanded, it would not be able to meet the demand, and would be obliged to suspend business till it could turn some of its other assets into money. But that fact does not cause John the least uneasiness. He knows that though his house and barns cannot resist a cyclone, they can resist the severest stress of ordinary weather, and he feels secure. In the same way he knows that though the bank cannot meet an extraordinary demand from all note holders at once it can meet the strongest demand that will occur in the ordinary course of business. He knows that although the bank cannot pay all note holders at once, it can pay him at any time should he want the gold, and that is all the assurance he requires.

Thus the printed promises or notes of the banks, in greater volume than the gold these institutions possess, pass freely from hand to hand and are accepted as readily as the gold itself, even though they are not legal tender and not guaranteed by the Government. It is an advantage for any corporation thus to augment its store of money, and be able to use its credit as well as its gold. The Dominion Government pursues that advantageous policy, as well as the banks. It issues notes to a greater amount than it holds gold to redeem them. To prevent these notes from returning to the Receiver General for redemption, the Government compels the banks to keep forty per cent of the reserves they hold for safety, in Dominion notes. When a bank is preparing its monthly statement, if it finds that it has less than the requisite proportion of Dominion notes, it is obliged to buy them with gold from a Deputy Receiver General. That helps to keep the

Dominion's promises or notes from returning for redemption, as does also the provision restraining the banks from issuing notes of smaller denominations than five dollars. The people continually require the Dominion Government's ones, twos, and fours for making change.

John Doe when parting with his wheat would receive a printed promise that the Bank of Commerce would pay him or the bearer on demand, five dollars, meaning 116.1 grains of gold. He would give that promise to the merchant and obtain the pair of boots he wanted. To make up the difference in value, the merchant would give him a printed promise that the Dominion would pay the holder of it on demand, one dollar, and also a silver coin stamped "Twenty-five Cents." The twenty-five-cent coin would contain 83.25 grains of silver and some alloy to harden it. At the time when that weight of silver was chosen, it was about the same value as quarter of a gold dollar

of 23.22 grains.* The object was to have the gold coin and the silver coin of the same value. The maintenance of that parity was of course impossible, values being subject to continual change through the law of supply and demand or marginal utility. To avoid the confusion of having gold and silver dollars of different values, the silver coins are issued only in limited numbers and are legal money only to the extent of ten dollars. A man entitled to receive more than ten dollars need not accept silver for the balance in excess of that sum. In small amounts silver coins are accepted as a matter of convenience. For still smaller change there is a bronze coin stamped "One Cent." The metal in this coin, although valuable, is not worth the hundredth part of a dollar, for which it is accepted, but it passes freely from hand to hand. These coins are legal tender to the extent of twenty cents.

* The metal in American silver coins, previous to 1853, was approximately equal in value to gold coinage. Canadian silver coins have always been tokens, limited in issue and use.

CHAPTER XI

NATIONAL BANKS, GOLD AND SILVER

When John Doe parted with his wheat for national bank notes he did not receive gold but the security of the United States that the metal would be delivered, a security given through the bonds mentioned on the national bank note. A bond when issued by the Government is a printed acknowledgment that the whole people, through their government, are in debt to the holder of it, and that they will pay him interest during the currency of the debt, and the principal when it falls due. When a government becomes unable to meet its expenses, through the cost of a war or any other outlay above income or revenue, the favorite method of borrowing is to issue bonds.

These bonds are sold, and as they are merely the promissory notes of the Government, the buyers are in reality lending money to the Government, or the whole people, on notes. These notes or bonds are excellent security, and are made to serve as an assurance, by the national banks, that such notes as John Doe receives for his wheat and pays for the boots will be redeemed on demand. If a few men want to start a national bank they must have from $50,000 to $200,000 according to the population of the town or city in which they intend to locate, the smaller amount being accepted in towns of less than six thousand inhabitants. They must buy government bonds with one-fourth of their capital if it is under $150,000, and to the extent of at least $50,000 if their capital is greater than $150,000. These bonds must be deposited in the United States Treasury, and for purposes of circulation the Government issues to the owners, when incor-

porated as a bank, such notes as were received by John Doe for his wheat, to the extent of ninety per cent of the value of the bonds. Thus the Government holds the bonds it has issued, but which belong to the newly formed bank that has bought them. In return the bank has circulating notes which it loans or otherwise uses, and which the Government is under obligation to redeem. When John Doe parts with his wheat for these notes he knows he can go to the bank and get the promised gold, or the government notes which will enable him to get it.

The national banks are required to report their financial condition to the Government, and the report of the First National Bank is an assurance of its ability to pay John Doe on demand. But even if it should fail, its bonds are with the Government as security and will be forfeited to pay note holders. There is, in addition, a deposit with the Government of five

per cent of the notes outstanding against each bank. People holding national bank notes can have them redeemed in gold by presenting them at the treasury in sums of $1000 or any multiple thereof. These notes, when thus redeemed by the Government, are charged against the banks issuing them, and when the notes held against any single bank amount to $500 that bank must buy them back and pay for them in Government notes. National bank notes are accepted by the Government in payment of excise and all taxes and dues to the United States except the duty on imports. They are also legal tender for all debts due by the Government to individuals, except interest on the public debt and the redemption of government notes.

The silver certificate which John obtains in change is a more complicated affair. It sets forth that a silver dollar has been deposited in the Treasury of the United States and is pay-

able to bearer on demand. It has been stated that a dollar is 23.22 grains, but that weight of silver would be far less valuable than the same weight of gold. The yellow metal, as we have seen, is coined into dollars, or rather into eagles and half eagles to save people the trouble of weighing it themselves. But when it is attempted to coin silver for the same purpose it is desirable that the gold and silver coins should be, not of the same weight, but of the same value. With that end in view the silver dollar is made heavier than the gold dollar in the same proportion that silver is less valuable than gold. The last coinage ratio adopted for the purpose of equalizing the value of the dollars was sixteen to one. Because gold was generally sixteen times more valuable than silver, the silver dollar was made sixteen times as heavy as the dollar of gold. As the value of all metals must vary by the pressure of supply and demand, this value ratio must be constantly

changing. Herodotus states that in the year 340 B.C. the value ratio of gold to silver was thirteen to one. In Rome it was nine to one in the year 60 B.C. Though the coinage or weight ratio may be fixed as closely as possible to the value ratio, the fluctuations of the latter will make the gold or the silver dollar occasionally more valuable. John Doe's silver certificate entitles him to 371.25 grains of that metal, which, in the fluctuation of values, may one day be worth more and the next day less than 23.22 grains of gold. When the silver is worth less than the gold, John will be inclined to pay his debts in silver dollars, or in certificates entitling the holder to silver dollars. Every one else will show a similar inclination, and the gold money will disappear. It will be found more profitable to take it to other countries where the coinage ratio or system is different, or to make use of it in the arts. When the gold coin is worth less than the silver, the inclina-

tion will be in the opposite direction, hence the less valuable coins always drive the more valuable out of circulation.

In 1792 Congress decided to coin both gold and silver dollars at a weight ratio of fifteen to one, that being as near an estimate as could be made of the value ratio. It was believed that gold was fifteen times as valuable as silver. So the silver dollar was made to weigh fifteen times as much as the dollar of gold. The weight of the gold dollar was 24.75 grains, not counting the cheaper metal added to harden it, and the silver dollar contained 371.25 grains, just fifteen times as much metal. But gold was worth a little more than fifteen times as much as silver, so the coin containing 24.75 grains of it was more valuable than the 371.25 grains of the white metal. Under the circumstances the people would naturally use their silver to make dollars for commerce, sending their

gold elsewhere. The gold dollars coined were bought by English goldsmiths. But the people had still less valuable dollars in the clipped, punched, and worn foreign coins, so they saved both their gold and silver for other purposes. A few silver dollars were coined in 1830.

In 1834 Congress attempted to aid the gold-mining industry by changing the coinage ratio to sixteen to one. The silver dollar was left at 371.25 grains, although the alloy was slightly changed, but the weight of pure metal in the gold dollar was reduced to 23.22 grains. At its former weight the gold dollar was worth more than the silver dollar. But the change was greater than the difference in value, and it made the gold dollar, not equal to, but less than the silver, in value. As a consequence only a few silver dollars were coined, and they were too valuable to be used as money. Gold became the

money of the country, because it was less valuable than silver at the weight adopted, and when in 1873 Congress abolished the free coinage of silver for the owners of that metal, it excited no general interest, silver being too valuable to be used for that purpose. Shortly afterwards the relative value of the metals approached and passed the coinage ratio. By a fall in the value of silver, an increase in the value of gold, or both changes acting together, gold became sixteen times, and more than sixteen times as valuable as silver. Silver miners then complained that they could not have 371.25 grains of their metal coined into a dollar as before.

Congress decided in 1878 as a measure of compensation, to buy sufficient silver at the market price to coin $2,000,000 a month. The silver bought under that act was sufficient to coin 378,166,795 dollars but the metal had so fallen in value that it cost only 303,190,262

gold dollars. The silver certificate received by John Doe in change was put in circulation by the Government in paying for this silver. In 1890 Congress enacted that 4,500,000 ounces of silver be purchased every month, with a requirement regarding coinage into dollars for the redemption of legal-tender notes to be issued. Under that law, which was repealed in 1893, the Government purchased 168,674,682 ounces of silver for $155,931,002, which were gold or virtually promises to pay gold. These purchases tended to compensate silver producers for the loss of the privilege of having their metal coined into dollars.

For his dollar of change John Doe might receive a greenback which would entitle him to 23.22 grains of gold, a treasury note promising him one dollar in coin, which might be 23.22 grains of gold or 371.25 grains of silver, a big silver dollar which would con-

tain 371.25 grains of that metal, or a silver certificate promising him the silver dollar on demand. Although 23.22 grains of gold are worth more than 371.25 grains of silver, he would accept these notes or promises as if they were of equal value, not at the average value of the two, but at the value of the gold coin. He would do so because the Government, to avoid having dollars of unequal value, has promised to redeem all the notes in the gold coins. Although the holder of a treasury note has a promise of coin only, the Government will not avail itself of its right to pay him with the less valuable metal, but will give him the gold if he asks for it. The holder of a silver certificate, too, though entitled to only a silver dollar, can obtain a gold dollar on demand. And the big silver dollar itself is accepted by the Government, consequently it can be exchanged for the 23.22 grains of gold. The quarter

dollar is a subsidiary coin, on the same principle as the Canadian quarter dollar described in the previous chapter.

There are also some smaller fractional silver, nickel, and copper coins, which are legal tender for limited amounts.

CHAPTER XII

BRITISH CURRENCY

In England John Doe would have paid for the boots with a sovereign, a coin containing 113 grains of gold and some alloys. The balance would be returned in silver coins of less value than their stamped denominations, but accepted freely for small amounts. There are no notes circulated in England, except those issued by the Bank of England, and the smallest denomination is £5, sometimes called five sovereigns, equal to 565 grains of gold. These notes are secured in part by the debt of the nation to the bank, but all additional issues must be secured to their full amount by gold held in the bank's vault for the redemption of them. It is in consequence no advantage

to the bank to increase the issue of notes, as the gold itself could be loaned as profitably. In Scotland and Ireland there are banks authorized to issue circulating notes of £1 and upwards. The amount they are permitted to issue was restricted by legislation in 1845, to their average circulation for the twelve months preceding May 1, of that year. The privilege of issuing notes was thus secured to the banks which then possessed it, but there is no provision for the establishment of new banks of issue. For any issue of notes in excess of the amount authorized in 1845 the banks must hold an equal amount of gold and silver coin, the silver to be not more, in amount, than one-fourth of the gold. Provision is made for the uniting of banks and the combining of their authorized note issue.

All these weights used in coinage seem irregular and likely to confuse, but the lack of regularity comes from reluctance to change the

standards. When people are accustomed to use a coin of a certain weight they know its value in all the things they buy and sell. They know how much cloth, how much coal, how much sugar, and how much flour a dollar or a sovereign will buy, and the coin comes to fill in their minds the place of a standard of value. A change in the weight of the coin would throw all calculations into confusion. There is consequently a reluctance to change the coinage weights. When laws have been enacted fixing regular standards for other weights and measures, the coins have not been changed, hence their weights are irregular when compared with the standards used in weighing ordinary commodities. The Canadian cent has been made regular, being exactly one inch in diameter and weighing the one-hundredth part of a pound. But as it is only a token, and the value of the metal it contains is of little consequence, it could be made of a

regular weight without disturbing any calculations as to value. The same could not be done with gold coins without causing confusion as to values, although the use of ounces and grains, instead of dollars might remove false theories as to standards of value.

Governments recognize the need of facilitating the transfer of raw metal into coin. Almost all debts are contracted in the form of obligations to pay, not the raw metal or bullion, but currency in some recognized form. If the transfer of raw gold into coin were a difficult matter it might cause serious embarrassment. The British standard for coining is 22 parts of pure gold and 2 parts of alloy, and anyone taking such gold to the mint can obtain it back in coins with but a very slight deduction for the work. For an ounce of standard gold the mint gives back, £3, 17*s.*, and 10½*d.* in coin. For those who do not wish to wait for the minting process, the Bank of England is obliged

to pay £3, 17*s.*, and 9*d.*, when the gold is presented. Silver is not thus coined on private account, as it is cheap and the people would use it exclusively as long as they could get rid of it at its token value. The Government limits the silver coinage, and retains the difference between the cost of the metal and the stamped or token value of the coins.

John Doe gave the merchant more money for the boots than was paid to the manufacturer for them. The difference or profit of the merchant exemplifies the method of remunerating for the work of distribution. After a great factory has turned out a consignment of boots, they must be distributed to the people who want them. Whether the man who distributes them goes along the road with them in his wagon day after day, or gathers all kinds of boots from different factories in a store that buyers may look them over and make their choice, the service he renders purchasers is the

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same in principle. He saves them the trouble of going from factory to factory, and he does work that would otherwise have to be done under greater inconvenience at the factories. It has been found advantageous for merchants to gather various lines of goods together and hold them to await the convenience of customers. If John Doe were forced to go all over the country to obtain his supplies he would find it as great a task as the cultivation of his farm. It is more profitable for him to pay the merchant an advance on factory prices. If the merchant asks too great an advance or profit for the service he renders, some one else will be attracted by the large profits and start an opposition establishment. This free competition tends to regulate the profits of the merchant, and make them coincide with the value of the work he performs. He is a useful member of the community rendering a service as necessary as that of the whaler, the miner,

the tanner, or the factory hand. It is not only necessary that boots be made by the labor of scores of hands in all quarters of the world, coöperating consciously or unconsciously. The boots must be held to suit the convenience of customers, and every one who takes them must be made to return payment. The payment must be transmitted to the workers in many lands, who have done their part in the complicated task of production. The same is true of every other line of merchandise, and all who contribute toward the consummation of this complicated result in production and exchange, whether they be laborers, mechanics, overseers, merchants, carriers, or bankers, are serving useful functions.

CHAPTER XIII

PAYING ALL THE WORKERS

We have seen how John Doe, by growing wheat, paid the merchant for a pair of boots, but have not seen how he paid all the men, who, years before, and in different parts of the world, coöperated in the many lines of work necessary to their production. We must see how he pays the Gaucho who galloped at night after the stampeded herd of cattle, the whaler who fired his harpoon or threw his lance into the oily monster of the ocean, the workmen whose flesh and bones have been eroded in the stifling air of the alkali works, the Brazilian who slashed his way through the malarial swamps of the Amazon, the miner who worked by candle-light in the

dark and dripping tunnels of the mountains, all down to the busy workers in the factories, and the clerk who served behind the counter. This difficult and necessarily complicated work is achieved by the instrumentality of capital, which is the saved results of labor in the past, devoted to increasing the productive power of present or current labor. While men work with a view to satisfying their immediate wants only, results are necessarily meagre, for it is impossible for each to confine himself to one special occupation. The Esquimau makes his own boots, the many slow processes entailing much patient labor. In a modern shoe factory a man will stand day after day putting on rough heels, but such specializing cannot be accomplished without the saved results of past labor, in the shape of machinery, buildings, and abundance of material, also food, clothing, and other necessaries for the workers, during the time that

must elapse between the production and consumption of their goods. When a workman in a factory put heels on the boots which were bought by John Doe, he caused the material with which he was working, the leather and nails, to become more valuable than they were before. They were brought by his labor nearer to a condition in which they would be serviceable to man. But some time must elapse before John Doe will want them and be willing to give the wheat from his farm for them. During the interval the workman is putting heels on scores of boots, but must depend for his living, for the satisfaction of his immediate wants, on the saved result of past labor. Without that he must live like the Esquimaux, hunting and fishing for daily maintenance and taking time to make boots for himself.

When the Indians gathered maize or corn for their immediate wants only, these wants

were but poorly supplied. But they learned the advantage of gathering more, for seeding purposes, instead of leaving that to the uncertain processes of nature. In that precautionary work they became capitalists, devoting the saved results of past labor to making present labor more productive. They also made rude implements for turning over the soil. In making digging flints as well as in making bows, arrows, and other weapons of the chase, they were working, not to satisfy immediate needs, but to increase the results of future work. By this foresight and self-denial they brought capital into existence and called it to their aid.

A shoemaker working alone at his bench does many of the later operations of making shoes. For that he requires capital, the saved results of past labor, and he has it in the form of a bench, lasts, awls, pinchers, and other tools of his trade. These are not di-

rectly the results of his past labor, for he could not make them. He began work with other people's tools and traded the products of that work for those he now possesses. He has also some capital in the form of money, and when a customer orders a pair of boots he buys the uppers, the soles, the leather, and other material needed to make them. When no orders are in he may have sufficient capital to buy material and make boots for future sale, thus avoiding loss of time. The possession of this capital, both in the form of tools and money is an advantage, and one for which the shoemaker would be willing to pay if he did not own sufficient capital himself. The payment he would make for the use of it would be interest, a subject which will be dealt with more extensively in a later chapter. If the shoemaker works hard and lives frugally, he becomes able to control more capital. He does not gather an abun-

dance of tools and leather about him. His income is greater than his expenses and he deposits the balance in a bank every week. In that way he gets the bank in his debt, and knows he can draw the universally desired gold at any time. He may have sufficient to buy one of the big machines in the factory, but it would be no use while he works alone. When he is able to make a bargain with a number of other shoemakers equally fortunate, he buys a nailing machine for use in a factory, another buys a lasting machine, another a sewing machine, and another an electric motor and shafting for supplying power.

A large number thus combining their savings can establish a factory fully equipped with tools and material. By separating the work and each performing some single operation, the productive power of each is increased. A factory with fifty workmen can produce more than double the output of a

factory with twenty-five workmen. For the same reason one hundred men in a factory can do more than double the work of fifty. These coöperating shoemakers may sell their products to a merchant, who can dispose of them to the wearers through retail dealers, or they may have their own organization or establishment of distribution, consisting of wholesale and retail stores. In either case they must own or borrow sufficient savings to maintain themselves and their factory till the returns from sales are available to make more and other purchases.

CHAPTER XIV

THE CAPITALIST

THE factory described in the last chapter would be called coöperative, because the men who work in it own the capital and are remunerated directly from the returns. Such factories are not nearly so common as those in which one man or a small company of men own the capital, and the workmen are paid in wages for their services. If a man wishes to start a shoe factory on that principle and is possessed of wealth the matter is easily arranged, though his possessions consist only of Canadian, United States, or British bonds, or other similar evidences of debt. These bonds cannot maintain workmen; they are not machinery, leather, or other material

required in shoemaking; in fact, they are not wealth properly so called. They merely show that the whole people are in debt to this man who desires to start a shoe factory. But the difficulties disappear, because the people in his debt are possessed of the capital or savings necessary to his purpose. They have sufficient food to maintain the workers during the initial stages; clothing sufficient for similar demands; brick, stone, lumber, iron, machinery, leather, and all essentials, or sufficient saved wealth to purchase the things required. If the people did not possess these savings the bondholder could not start a shoe factory nor any other manufacturing or commercial enterprise on his bonds. If he holds bonds issued by a savage tribe in Africa or elsewhere, he cannot secure material for a factory with them. However deeply the tribe may be in his debt, if there is no prospect of the debt being paid the bonds are of no value. But

the bonds of a solvent country he can take to the stock-exchange and sell for money, with which he pays the builders of his factory and buys machinery and a complete outfit of material. Then he can hire shoemakers and other necessary workers.

At the end of a week the shoemakers have made his material more valuable, and he pays them their wages in money, which procures for them the things they require. Next week he again pays them their wages, his capital being thus decreased in one form, and more largely increased in another. Soon he has a large stock of finished boots which he sells to a wholesale dealer, receiving more than he paid for wages and material. The advantages of working together in a large force are so great that he can pay the shoemakers as much as or more than they could earn working alone at their benches, and have a substantial balance for himself. This balance, so

far as it is derived from dividing and specializing the trade, is the interest on his capital invested in the business.

It is through this method of using capital that John Doe pays the many workers in various lands who assisted in making the pair of boots which he bought. One man decides to invest the wealth in his possession or at his disposal in a whaling expedition. By selling it or trading it he procures a ship, fits it out with try-works for melting the blubber, barrels, harpoons, lances, small boats, and all the accessories of the work. He lays in a store of provisions sufficient to maintain the crew on a long voyage, and engages the necessary force of men. They have their maintenance aboard during the voyage, and on arrival in port are paid off, the owner's capital in one form being almost exhausted, while he is richer in the oil that has been gathered. For it he is paid by the currier

who wants it in preparing leather. The currier is recouped for this and other outlays when he sells the leather to the shoe manufacturer, who is paid in turn by the merchant. Thus when Joe Doe pays for the boots over the counter, a part of his money goes to adjust the payment made to the whalers two years before at the end of their voyage.

The miners who work the drills and hoist the ore in the heart of the mountain are paid by the owner of the mine and its machinery, who is paid in turn for his metal by the maker of shoe eyelets, and a part of John Doe's payment recoups the merchant, the manufacturer, the eyelet maker, and the mine owner for wages paid to the miner. The Gaucho of the southern plains is paid by the herdsman, who receives his pay from the English importer or butcher. For the hide the butcher is paid by the tanner, the tanner by the currier, and the

currier by the boot manufacturer. Through him and the merchant John Doe remunerates the Gaucho for his aid in making the pair of boots.

The native Brazilian who blinks in the smoke is paid by the recognized owner of the forest, who supplies him with food, and through a long list of exchanges the last payment for the rubber in the cemented joints of the boots is made by John Doe. In the same way, John finally remunerates those who pay the workmen who smart and smother in the alkali works, the men who attend the machines in the factory, and the clerk who exhibits and parcels up the boots in the merchant's establishment. The workers mentioned are but a few of the thousands who helped to make the pair of boots, the boots are but one of the thousands of useful articles in which each of their products have been consumed, and the wheat grown by John Doe

goes to satisfy quite as great a multitude of wants. In the long transition from producer to consumer, some have been paid at once by others in a position to wait for returns. Those in a position to make such advances are called capitalists.

CHAPTER XV

INTEREST — JOINT STOCK COMPANIES — TRUSTS

We have seen the advantage which comes with the possession of capital, how it enables the owner to wait for returns and specialize labor, thus increasing its product. This increase in the productive power of labor on account of the employment of capital is interest. In the examples considered, every man employing or investing capital owned it himself, and obtained his interest in the form of increased products. The examples extended from the Indian who saved seed corn to the investor in a factory. But it is often advantageous for a man to invest or employ capital which he does not own. One may have special aptitude for managing a shoe factory but may

lack the requisite capital, while another owning sufficient capital may have but little ability for conducting the enterprise. If the latter establishes a factory he will achieve but indifferent results, and the former, through the lack of capital, may not be able to make use of his ability for factory management. It is clearly to the advantage of him who is competent to manage a factory, to borrow the capital of the owner, paying him a regular amount yearly for its use. This regular payment is another form of interest, and it is bargained for at a certain rate per cent per annum. The factory manager does not seek for some one who will lend him the necessary machinery and materials. He simply borrows money, agreeing to pay a certain rate per cent yearly for its use, and to return it at a specified time. With the borrowed money he buys all the things needed in his business, just as if he owned it himself. Thus while in reality he borrows a

factory and all the accessories for increasing the productive power of labor, the recorded transaction is the borrowing of a sum of money at interest.

This borrowing is so common that banks and other institutions are organized to facilitate it. They receive the small savings and surplus money of many people, and pay a low rate of interest on it. Their business is to lend it again at higher rates, the difference being the payment for their services in concentrating the savings where they are needed. The difference also makes good the many losses they suffer through bad debts. The banks with power to issue notes lend their credit, which serves the purpose of money, and derive a considerable advantage from that line of business. It is seldom that a man can borrow the entire amount needed to establish a manufacturing industry. But some of those with industries and business establishments already in opera-

tion are continually extending the scope of their business beyond the limits of the capital they own, and are in consequence continually in need of advances of money at interest. In reality they borrow an additional machine, an additional supply of goods or an additional building for an extension of work or business.

We have seen how a man or a set of men owning wealth, or having the community or some reliable firm in debt, can start a shoe factory. We have considered the coöperative factory, and the factory owned by a single investor. Another common method of combining the capital of several persons in one industry is the organization of a joint stock company. If ten men uniting to carry on a coöperative shoe factory, decide to adopt the joint stock method, they estimate the value of their machinery, material, and business establishment. If it is $10,000 they get a legislative act passed incorporating them with a capital of that amount.

That act gives legal existence to a body corporate. Each coöperating partner, if all have invested equally, receives $1000 stock in ten shares of $100 each. They then meet and elect from among themselves, a board of managers to conduct the business. This board holds office generally for a year. At every board election each stock-holder's vote counts according to the number of shares he holds. The profits or returns from business, above expenses, are divided among the stock-holders, each getting a yearly or half-yearly dividend, estimated as a certain percentage on his stock. Let us suppose that five men uniting to conduct a stove-foundry, obtain an act incorporating them with, say, $1,000,000 capital stock. One puts in $100,000 and receives one thousand shares at $100 each. Another puts in $200,000, for which he receives two thousand shares, and two others put in $50,000 each, receiving five hundred shares each as an acknowledgment.

The fifth has no money but has special knowledge of the business, and for that he is given one thousand shares. There are now five thousand shares of $100 each, or half the total authorized issue owned by these five men, and the company has in its treasury $400,000 contributed by four of its members. All five stockholders vote according to the stock they hold, in electing a board of directors, which will doubtless be themselves. With the $400,000 they erect buildings and cupolas, buy iron, sand, flasks, engines, boilers, machinery, and all things needed for the business. They hire workmen and proceed with the making of stoves. Before returns begin to come in their capital is exhausted. They can borrow money from a bank, or sell some of the remaining five thousand shares of the $1,000,000 capital stock they were authorized to issue. They offer one thousand shares for sale, which are bought in small quantities by a score of buyers. If the business has

a good outlook the shares will sell above par, or bring more than $100,000 to the business. The buyers of this new stock are entitled to vote, in proportion to their holdings, at the election of directors, and to have their percentage of the dividends declared from the returns of the enterprise.

One advantage of the joint stock method of partnership is ease of transfer. A man whose capital is invested in a shoe factory in the morning, may sell his shares and buy others in a sugar refinery by noon. Before evening he may sell these shares and invest in a railway, a bank, a stove-foundry, a land company, a coal mine or any other enterprise. At the stock exchanges, shares in various enterprises as well as bonds and debentures of many kinds are continually changing hands, so that a man can transfer his capital from one enterprise to another many times in a day. John Doe may have held stock in the factory in which the

boots he bought were made. Through this method of combining capital, great trusts are organized. Men unite their capital and buy up the stock of many shoe factories. They strive by the coöperation of present stock-holders, to bring all the factories of the country under a single board of directors. Such combinations lessen the cost of management, manufacture, and distribution, but under some conditions enable owners to inordinately advance prices to the consumers.

The interest or dividend which capital produces has been called the reward of abstinence, not that the stock-holder lives frugally, but because he refrains from consuming his capital and gives others the use of it. We have seen how abstinence or self-denial is necessary to bring capital into existence, and the same conduct is also necessary to keep it in existence. If John Doe had decided to buy a hat instead of a pair of boots, he would have lessened the

demand for boots and increased the demand for hats. Somewhere in the great world of industry, labor would have been turned from the making of boots to the making of hats, although it might be as imperceptible as the impact of a pebble, thrown in the ocean, on the farthest shore. In the same way if a man ceases to abstain, and consumes his wealth in various forms of indulgence, labor is somewhere turned from the production of permanent capital to the production of things for immediate use. If he holds stock in a shoe factory he cannot eat the stock or amuse himself with the machinery. If he ceases to abstain, he sells his stock, and the factory goes on as before. With the proceeds of the sale he buys costly viands and rich apparel, has a splendid mansion, a yacht, and a special car built for his own use, and indulges in costly luxuries till all is spent. He has turned labor from the production of capital to the production of things for his personal indul-

gence. Less capital has been available, in consequence, to increase the productiveness of labor. The public have lost to that extent, a loss that must be felt somewhere in the industrial world, and he has deprived himself of the dividends or interest he might have obtained as the reward of abstinence.

Although rich men are abundant and fortunes are growing, the amount of real capital available at any time is never large. The bondholder can start a shoe factory, but that does not prove that bonds are wealth or capital. Bonds issued by the government are an evidence of the debt of the whole people to a few people, and could be destroyed without lessening the wealth of the community. Bonds of a railway or other corporation are records of its debt. Paper money, too, is an evidence of debt, and could be destroyed without lessening the total wealth of the people. The value of land, so far as it is due to the growth of

population and not to inherent productiveness, is an indication that the people are poor in land. The land titles that go to make up so many large fortunes could all be revoked without lessening the wealth of the whole people. A small amount of actual wealth is made the basis of many large fortunes, which consist really of the debts of the whole people. The real capital in the world is never great. It is nature's law that the world must live, as it is described in current phrase, "from hand to mouth." Every extensive destruction or waste of capital is felt in its injurious effect on trade and industry.

CHAPTER XVI

GOVERNMENTAL INTERFERENCE

It is natural that the men who compose governments and exercise authority should regard themselves better able to decide as to the advisability of various lines of industry than the people actually engaged in them. Left to themselves, the people adopt that which seems to them the easiest method of accomplishing their aims. If they want stoves, and find it easier to grow wheat and give it in exchange than to make the stoves themselves, they will adopt the easier method. If they can get wheat and beef easier by weaving cloth or making stoves, than by sowing grain and raising cattle, they will adhere to weaving and stove making. The pressure of supply

and demand crowds out the more costly processes. But governments are often convinced that better methods are possible.

If the maker of John Doe's boots imported the leather, that is, bought it from some one in England or elsewhere, it would mean that the people here found it more profitable to make something else and give it in exchange for the leather than to make the leather themselves. That leather would be paid for with John Doe's wheat. The shoe manufacturer would not send money across to England when buying leather there. The currier in England, when selling, would draw a bill of exchange on the American manufacturer and sell it to an English banker. It would be sent across to an American bank to which the American manufacturer would make his payment. The English buyer of John Doe's wheat would not forward money across to the United States. The grain dealer would draw

a bill of exchange on him and sell it to an American bank. That would be mailed to an English banker who would demand payment from the wheat buyer. Thus the local bank would pay for John Doe's wheat, but would be remunerated by the money of the leather buyer, and the English banking house would pay for the leather and be recouped by receiving the money for John Doe's wheat. Both transactions, though entirely independent in themselves, would be settled between the banks in a clearing house, without the shipment of money. In reality the leather would be paid for with the wheat.

If the government decide that it would be profitable for the people to tan and curry their own leather it interferes in the matter. No man would undertake the business, because he would lose his capital. He must sell his product at the same price as foreign leather, and it might cost more than that to manufacture it.

The Government agrees to give any one tanning and currying leather, a subsidy sufficient to make good the loss and yield interest on the capital invested. Men become more willing at once to engage in the work, and a new industry is established. The subsidy is taken from other people and from other industries, so the creation of industries in that way must be limited by the ability of the people to bear the increased burden.

Subsidies are sometimes given for the mining of minerals, when they exist in such a form that it will not pay to take them from the ground. They are given occasionally for later processes such as the smelting of ore or the rolling of metal into bars, when the proceeds of such industries, unaided, would not equal their cost. Such help is sometimes given to promote methods of disposal which would otherwise be unprofitable and consequently abandoned. Exportation is the

method generally assisted. Germany, France, and Austria have given large sums of money, from year to year, to the men who have exported sugar. These subsidies have made serious additions to the people's burden of taxation. The sugar was sold chiefly in England, so cheap that it did not pay the cost of manufacture and transportation, but the loss was made good to the exporters by the subsidies. Sometimes the Government furnishes seed to farmers, at public expense, to induce them to change their crops or methods, or supplies live stock, or the material for various industries.

Another method of aiding industries is by a protective tariff. Instead of giving the tanner and currier direct subsidies to make good their loss, a tariff is imposed on imported leather. This enables the makers of leather to charge the shoe manufacturer a price sufficient to make the business profitable. The

shoe manufacturer could not charge the increased cost to the merchant without the protection of an import tariff on boots and shoes. This also is imposed, and John Doe instead of paying taxes for a direct subsidy to the leather maker pays it in the higher price of his boots. This is referred to in a previous chapter on taxation.

An import tariff on pig-iron enables the smelter to charge a price sufficient to make his work profitable. The tariff on bar-iron enables the owners of rolling mills to recoup themselves for this higher price. The tariff on machinery enables the foundry-men and machinists to recoup themselves for the higher prices of bar- and pig-iron. The shoe manufacturer who buys machinery at the advanced price, is compensated by the higher price obtainable through the tariff on boots, and John Doe makes his contribution when buying a pair. The aiding of one industry

necessitates the compensatory aiding of many. In Britain they have abandoned all such aids, the Government proceeding on the assumption that the people actively engaged in the numerous methods of producing wealth are best able to decide what is profitable and should be continued, and what is unprofitable and should be abandoned.

CHAPTER XVII

SCHEMES FOR BETTERMENT

THE British Government abandoned interference with the production of wealth, chiefly on account of its influence on distribution. The corn laws, a tariff on imported grain, enabled the farmer to charge excessive prices for food supplies. It was argued that the farmers who sold food and hired labor had all the advantage, and that the workmen who sold their labor and bought food had no protection. The same argument is still advanced against the protection policy — that it gives no compensation to workmen, who must buy the taxed articles and sell their labor in open competition. The British people suffered from low wages and dear goods, till

there was widespread distress. It was thought that perfect freedom to manufacture and exchange, to buy and sell, to work at any employment and to make the best bargain possible on all occasions, free from a restrictive tariff, would enable every man to get the exact value of the service he rendered the community. It was complained that the men who worked hardest and produced most, were not the richest, but generally the poorest, and to remedy that, all the laws obstructing trade or industry — all laws helping one method of wealth production at the expense of another were abolished.

We have seen how, when labor is aided by capital, the product is shared between the worker and the owner of the capital. The reward of the laborer is called wages, whether he works for a stipulated wage or employs himself at some primary occupation, such as fishing or gathering wild fruit. The reward

of the owner of capital is called interest, whether he loans it at a stated rate per cent, or employs workmen to operate his machinery while he sells the products of their labor. A workman may use his own machinery and capital, as in the case of a blacksmith with his own forge and anvil, a fisherman with his own boats or nets, or a shoemaker with his own tools and material. In such cases the returns received would be part wages and part interest, but the distinction between them should be clearly maintained. Another element to be considered in the problem of distribution of wealth is rent, which, in its economic sense means the return which goes to the owner of the land. Land is a term used to imply, not merely the soil of the farm and the area of the city lot, but minerals, forests, water and all nature's material gifts to man. It is man's most enduring possession, though its value may fluctuate or

entirely disappear by the movement of population or other influences. The machinery used in the shoe factory was taken from the land by human labor, and by the processes of nature will return to the land again. There is consequently a difference between owning the machinery and owning the land. A barrel of water taken from the lake and carried to where it is wanted becomes valuable. Labor has been profitably expended on it. But by the laws of nature that water will return to the lake again. That exemplifies the difference between owning the barrel of water and owning the lake, which is land in an economic sense. The food and clothing, the houses, the machinery, all the wealth with which we are surrounded has been taken from the land by human labor and must return to the land again. The portion of the products of labor which goes to the owner of the land is called rent, and in large cities

where there are great opportunities for trade, land becomes very valuable through rent being extremely high. The yearly value of a location for a store is estimated in rent, and that determines the value of the site. As cities increase in size the returns to the landowners become proportionately large. The principle of land valuation is explained in Chapter VIII.

The abandonment of governmental interference with trade and manufacture in Britain did not bring about all the good results expected. Although workers were trying to sell their labor to the best advantage, men, women, and children were obliged to work unreasonably hard in factories and workshops for a meagre living, and the increased productive power of their labor through the use of machinery did not make much improvement in their condition.

The failure of machinery and the combination of working forces to bring plenty to

all, has been attributed to the increase of population beyond the capacity of the country to sustain it, but the defect is quite as marked in new and unsettled countries as where population is dense. Distress prevails because there seem to be too many hands ready to do all the work necessary for human maintenance and comfort. Disappointing results have led to two attacks on the existing organization of industrial society, from diametrically opposite standpoints. The Socialists declare that freedom of contract, as exemplified in Britain, has not given every man a proper return for the service he renders, nor even a near approach to it — that abundant luxuries are enjoyed by those who do nothing to create them and render no service to others, while those who work hard and produce wealth have but a scanty living. As a remedy they would abolish freedom of contract, and turn over all this complicated mechanism of production and distribution to

the supervision of the governments of various nations. They would impose on the authorities the duty of seeing that each rendered his share of useful service and received his share of the necessaries and luxuries of life. They make an appeal to the higher nature of man, and claim that each should work, not for his personal advantage, but for the good of his fellow-men. They say that the command to man to love his neighbor as himself, should be carried into every walk of life. As a first step toward their proposed change they seek to turn the railways and machinery of transportation over to the national governments, and the water, gas, and street-car services over to the municipal governments.

The Individualists also admit the failure of the existing system to give each an adequate return for his services, but claim that it is not due to freedom of contract but to the absence of that condition. They say that workmen sell

their labor for far less than its actual productive power because they do not enjoy freedom of contract. They claim that labor is sold under stress or duress, because workers are denied the right to employ themselves, that the sale of labor is not a free contract unless all have an equal right of access to the earth's surface, that is, an equal right to what economists call land. It is their contention that past generations had no right to parcel the land among themselves, as it is the heritage of the whole human race — that a man denied his equal share in this heritage must sell his labor, not in a free contract, but at a great disadvantage. He cannot employ himself, and must accept whatever somebody else is willing to give him. Freedom to trade as in Britain is but a short step toward freedom of contract, and the right of self employment by access to land is an essential not yet secured. It is claimed that the apparent overcrowding of

population is due to the fact that the present system induces men to obtain land before they want to use it, and to hold it till the pressure of population increases its value. Those Individualists who confine their attention to agricultural land would throw it open to the public, under such regulations as would secure to each worker the product of his labor, and prevent any one from holding a greater area than he could profitably use. Those who wish to restore urban as well as rural land to the people would leave existing titles untouched, but would turn over the rental value of all land to the Government in lieu of all other taxation. This, they claim, would put the whole people in the position of the landlord, or collector of economic rent, would remove the chances of gain which now induce men to take land and hold it at a high price before they want to use it, and would leave unused land free and open to the unemployed. The practical efforts of this cult

take form in the gradual shifting of taxation from trade and the products of industry to land according to its value. While the Socialists attribute existing evils to free bargaining in the sale of labor and its products, the Individualists attribute them to the absence of such freedom in bargaining. Whatever system may be in vogue we must live by labor, by satisfying each other's wants, and the wealth which our labor takes from the land must return to it again after having served our purpose.

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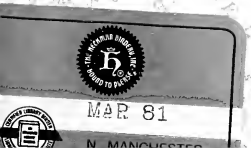

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